

REMARKS

Claims 1-36 remain pending in the application, with claims 1 and 30 being the independent claims. Reconsideration and further examination are respectfully requested.

In the Office Action, claims 1-8, 10-20 and 24-29 have been rejected under 35 USC § 103(a) over U.S. Patent 4,658,514 (Shin) in view of U.S. Patent 2,793,136 (Root); claim 9 has been rejected under § 103(a) over Shin in view of Root and U.S. Patent 4,779,360 (Bible); claims 21-23 have been rejected under § 103(a) over Shin in view of Root and U.S. Patent 5,276,981 (Schaffer); and claims 30-36 have been rejected under § 102(b) over U.S. Patent 4,356,643 (Kester). Withdrawal of these rejections is respectfully requested for the following reasons.

The present invention concerns a shoe having a plurality of indentations on its bottom surface, with lower (e.g., ground-contacting) portions between the indentations. An example is shown in original Figure 4 of the present Specification, which shows the cross-section of a portion of a shoe's insole and outsole, having indentations 52 and lower ground-contacting portions 54 between them. Also see, e.g., page 12 line 20 through page 13 line 28 of the Specification.

Generally speaking, in accordance with the present invention, small particles are bonded differentially to different areas of the bottom surface, based on whether an area is a lower extending portion or an indentation, with an emphasis toward coating lower extending portions. See, e.g., revised Figure 4. In one representative embodiment, the small particles are flocking fibers. See, e.g., page 8 line 16 through page 14 line 4 of the Specification.

A technique for achieving this configuration is described, e.g., at page 12 line 24 through page 13 line 12 of the Specification, with reference to Figure 4 thereof. In one representative embodiment, at least some of the lower extending portions have a plurality of small particles

bonded to them, but each of the plurality of indentations is predominantly uncoated with such small particles. *Id.* In another, only the lower extending portions of the shoe's bottom surface are coated. See, e.g., page 12 lines 20-23.

One advantage of these configurations is that if and when the flocking or other particles eventually wear away, the entire bottom surface of the shoe often will have a more uniform appearance than if the entire bottom surface of the shoe were coated. The reason is that it ordinarily would be very difficult or impossible for the particles adhering to the surface within the indentations to wear away at the same rate as the particles on the lower extending portions. See, e.g., page 13 lines 6-12 and 25-28 of the Specification.

Thus, independent claim 1 is directed to a shoe in which the bottom surface, which is adjacent to the ground in normal use, has a plurality of indentations, with lower extending portions between such indentations. An example is set forth in Figure 4, which shows the cross-section of a portion of a shoe's insole and outsole, having indentations 52 and lower extending portions 54 between them. Also see, e.g., page 12 line 24 through page 13 line 12 of the Specification. A sole forms at least a portion of the bottom surface, and an upper portion extends above the sole. See, e.g., page 9 lines 2-4. A plurality of small particles is bonded to at least some of the lower extending portions (e.g., portions 54), but each of the plurality of indentations (e.g., indentations 52) is predominantly uncoated with such small particles. See, e.g., page 12 line 24 through page 13 line 12 of the Specification and revised Figure 4.

The foregoing commendation of features is not disclosed or suggested by the applied art. For example, no permissible combination of Shin and Root would have disclosed or suggested a configuration that includes indentations separated by lower extending portions, in which small

particles are bonded to the lower extending portions but the indentations are predominantly uncoated.

In this regard, Shin describes and illustrates a running shoe having a particular sole structure. See, e.g., Shin's Abstract. More specifically, Shin's design uses a plurality of parallel slots 50 cut into the ball of the outsole to increase flexibility at that portion of the sole's structure. See, e.g., Shin's Abstract and column 3 lines 65-68.

Shin's bar treads 76, which are the portions of Shin's sole between adjacent slots 50, are provided with ridges 78. Shin states that the purposes of such ridges 78 are twofold: to maximize traction and to provide a cushioning effect. See, e.g., column 3 line 68 through column 4 line 6 of Shin's disclosure.

As acknowledged in the Office Action, Shin does not say anything at all about the above-referenced feature of the invention. In fact, Shin does not even say anything at all about bonding a plurality of small particles to any portion of the bottom surface of a shoe. In order to make up for this latter deficiency, the Office Action points to Root.

In this regard, Root concerns slip-resistant surfaces and methods for making such surfaces. See, e.g., Root's title and column 1 lines 15-17. More specifically, Root's slip-resistant surfaces include a thick layer of resin supporting matrix into which angular or rough resin granules are embedded. See, e.g., column 1 lines 55-60. "Portions of the granules extend well above the free surface of the matrix." See, e.g., column 1 lines 59-61 and Figures 1, 7 and 9 of Root.

Root's process is summarized at column 3 lines 1-8:

"The slip-resistant surface 10 of the present invention (see Fig. 1) may be formed on a variety of objects by coating or impregnating a surface 12 (see Fig. 2) with a relatively thick layer 14 of a fluid dispersion of finely divided resin particles in a

liquid plasticizer and thereafter distributing angular or rough, plasticized or unplasticized resin granules 16 on or in the resin dispersion and heating the dispersion to solidify it.”

Root repeatedly emphasizes that the fluid dispersion layer 14 should be relatively thick. In one example, “The coating 28 was of sufficient thickness to impregnate the wool felt sole 18 to a depth of about 1/8 of an inch.” See column 5 lines 41-43 of Root. In another embodiment, the layer was 3/16 inch thick. See column 5 lines 60-62 of Root.

The Office Action argues that it would have been obvious to replace the ridges on Shin’s bar treads 76 with an anti-slip surface coating as described by Root. However, for at least the following reasons, Applicant does not believe that there would have been any motivation for one of ordinary skill in the art to modify Shin’s shoe in this manner.

First, as noted above, Shin discloses a running shoe. For reasons of comfort, functionality and/or aesthetics, it is difficult to believe that one of ordinary skill in the art seriously would have considered embedding hard resin granules into the bottom of a running shoe. Although Root shows one example in which its anti-slip coating is applied to the bottom of a shoe (Figures 5, 6 and 8 of Root), that shoe appears to be a work shoe or a boot which does not appear to be suitable for running.

Second, Shin states that the ridges on its bar treads 76 have two purposes: to maximize traction and to provide a cushioning effect. Even if it were true that Root’s anti-slip surface coating would have a similar effect with respect to increasing traction (and Applicant does not believe it would), substituting hard resin granules for ridges almost certainly would reduce, rather than improving, any cushioning properties. Moreover, the application of Root’s anti-slip surface would require several additional manufacturing steps, unlike merely providing ridges on a shoe’s sole, which can be accomplished simply by properly designing the outsole’s injection

mold (with no additional manufacturing step). Accordingly, it is difficult to believe that one of ordinary skill in the art would have made the asserted substitution, in view of the fact that such a substitution would have cost more while being less suitable for Shin's stated purposes.

Third, as noted above, Root's process requires a relatively thick layer of fluid dispersion (e.g., at least 1/8 inch thick). The required thickness of this layer almost certainly makes it impossible, or at least highly impractical, to differentially apply particles to the bottom of Shin's running shoe in the manner asserted in the Office Action. That is, with such a thick coating, it almost certainly would be impossible to coat Shin's bar treads 76 but avoid coating its slots 50.

For all of the foregoing reasons, Applicant believes that there would have been absolutely no motivation for one of ordinary skill in the art to combine Shin with Root in the manner asserted. Accordingly, independent claim 1 is believed to be allowable over the applied art.

Independent claim 30 is directed to a shoe in which a bottom surface that is adjacent to the ground in normal use has a plurality of indentations, with ground-contacting portions between the indentations. See, e.g., Figure 4 and page 12 line 24 through page 13 line 12 of the Specification. A sole forms at least a portion of the bottom surface, and an upper portion extends above the sole. See, e.g., page 9 lines 2-4 of the Specification. A plurality of small particles are bonded differentially to different areas of the bottom surface, with each of a plurality of the ground-contacting portions being coated more than each of the plurality of indentations. See, e.g., page 12 line 20 through page 13 line 28 of the Specification.

The foregoing commendation features is not disclosed by the applied art. For example, Kester does not disclose a shoe bottom-surface configuration having a plurality of indentations with ground-contacting portions between the indentations, in which small particles are bonded

differentially to different areas, with each of a plurality of ground-contacting portions being coated more than each of a plurality of the indentations.

With regard to this feature, the Office Action refers to Figure 2 of Kester and asserts that Kester's "lower extending portions [14 include] two sidewalls and a horizontal sidewall" and, therefore, their "surface area... is much larger than the surface area of the indentations [so that] the lower extending portions are coated more than each of the plurality of the indentations". This analysis is believed to be incorrect, even under the previous wording of claim 30, for at least the following reasons.

First, under any reasonable construction of claim 30, Kester's "sidewalls", if anything, would be considered part of the presently recited "indentations", rather than the previously recited lower extending portions between such indentations. To the contrary, under the Office Action's apparent claim construction, the presently recited "indentations" would only read on the flat surfaces between Kester's cleats 14. Clearly, under any reasonable claim construction, mere flat surfaces alone could not be considered to be "indentations".

In addition, claim 30 has been amended above to refer to the "ground-contacting portions", rather than the "lower extending portions", between such indentations. This amendment is supported, e.g., at page 12 line 20 through page 13 line 28 of the Specification and further distinguishes Kester. Specifically, Kester's sidewalls cannot possibly be said to be a part of the presently recited ground-contacting portions.

Finally, it is noted that there is no differential bonding of small particles, as presently recited, in Kester. The Office Action appears to be asserting that the feature of one surface potentially being larger than another can constitute differential bonding, as presently recited.

However, it is unclear how this can be the case. The size of a surface clearly is independent of the manner in which particles have been bonded to it.

For all of the foregoing reasons, independent claim 30 is believed to be allowable over the applied art.

The other rejected claims in this application depend from the independent claims discussed above, and are therefore believed to be allowable for at least the same reasons. Because each dependent claim also defines an additional aspect of the invention, however, the individual reconsideration of each on its own merits is respectfully requested.

In order to sufficiently distinguish Applicant's invention from the applied art, the foregoing remarks emphasize several of the differences between the applied art and Applicant's invention. However, no attempt has been made to categorize each novel and unobvious difference. Applicant's invention comprises all of the elements and all of the interrelationships between those elements recited in the claims. It is believed that for each claim the combination of such elements and interrelationships is not disclosed, taught or suggested by the applied art. It is therefore believed that all claims in the application are fully in condition for allowance, and an indication to that effect is respectfully requested.

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